

**DATA LINK TESTER****ABSTRACT**

A data link tester comprises a computer capable of a connection with a communications bus in a piece of equipment having at least one component in selective contact with the bus. The computer contains instructions for (1) building a roster comprising at least one identifier of the component and (2) then performing a diagnostic step comprising at least one of (i) analyzing communications received from the communications bus to determine the condition of communications with respect to the component, (ii) determining whether a message that contains the identifier has been received from the communications bus within a specified period of time, and (iii) diagnosing at least one fault condition in CAN communications in the communications bus by performing at least one CAN message check comprising determining whether a CAN message has been received from the communications bus and then performing at least one second diagnostic step. In some embodiments, the piece of equipment is a vehicle.

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